

**REMARKS**

Favorable reconsideration of this application is respectfully requested in view of the foregoing amendments and the following remarks.

No claims are canceled or added by this response. Claims 1, 7 and 13 are amended. Thus, claims 1-18 are pending in the present application, of which claims 1, 7, and 13 are independent.

**Acknowledgement of Priority Document Receipt Requested**

A certified copy of the priority document was submitted on February 27, 2004. To date, no official acknowledgement of the USPTO's receipt of the certified copy of the priority document has been noted in the prosecution history. In other words, none of boxes 12.a.1, 12.a.2 and 12.a.3 has been checked on the Summary page (form PTOL-326) of Office Action. The undersigned has no reason to believe that this circumstance implies anything other than a minor oversight on the part of the USPTO. Accordingly, official acknowledgement of the USPTO's receipt of the certified copy of the priority document is hereby respectfully requested.

**Noted - IDS Considered**

The indication (see attachment to the Office Action mailed October 17, 2007) that the Information Disclosure Statement (IDS) as filed on February, 27, 2004 and August 6, 2007 and references listed therein have been considered is noted with appreciation.

**Noted - Drawings Approved**

The indication (see present Office Action Summary, box 10(a) as checked) that the Drawings (submitted on February, 27, 2004) have been approved is noted with appreciation.

**Claim Rejection Under 35 U.S.C. §103**

Claims 1-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. (US 2002/0138645 A1, hereinafter Shinomiya) in view of Fujii et al. ("Management of WDM self-healing networks", hereafter Fujii).

**INDEPENDENT CLAIMS 1 AND 13**

As an example, independent claim 1, as amended, recites (among other things) the following features:

- calculating a failure notification time for each network node, the failure notification time indicating a time from when a failure notification message is transmitted by the failure detected network node until the each network node receives the failure notification message;

- selecting a first network node based on the failure notification time, out of the first path network nodes that are positioned in the current communication path on the upper stream from the location of the network failure; and

- determining an alternative communication path that includes the first network node and a second network node out of the second path network nodes with a network node having the failure notification time longer than the failure notification time of the first network node excluded from network nodes forming the alternative communication path, the second network node being positioned in the current communication path on the down stream from the location of the network failure

As will be explained below, at least the above-noted features of claim 1 are a distinction over each of Shinomiya and Fujii, and thus over their combination.

Fujii discloses on page 1032 (4. INTEGRATED NETWORK DESIGN METHOD) that "Our method for spare capacity assignment assumes that the restoration algorithm selects in the case of a failure the route requiring the shortest time".

The algorithm, as described on page 1030 (3.4 WDM NETWORK RESTORATION ALGORITHM and 3.4.1 ALTERNATE ROUTE-SEARCH PHASE), searches an alternate route. On the other hand, in claim 1, a route for which a failure notification time is calculated is the one along which a failure notification message is transmitted.

Therefore, "the route requiring the shortest time" in Fujii does not disclose "selecting a first network node based on the failure notification time" in claim 1.

Next, Shinomiya discloses in Fig. 7 (P4) that "Deleting nodes having the failure notification time beyond the upper limit except for nodes on the working node" to design a protecting route.

In claim 1, the method determines an alternative communication path "with a network node having the failure notification time longer than the failure notification time of the first network node excluded from network nodes forming the alternative communication path". Hence, this feature of claim 1 is a distinction over Shinomiya

Therefore, the following features of claim 1 are a distinction over each of Fujii and Shinomiya, and thus over their combination.

calculating a failure notification time for each network node, the failure notification time indicating a time from when a failure notification message is transmitted by the failure detected network node until the each network node receives the failure notification message;

selecting a first network node based on the failure notification time, out of the first path network nodes that are positioned in the current communication path on the upper stream from the location of the network failure; and

determining an alternative communication path that includes the first network node and a second network node out of the second path network nodes with a network node having the failure notification time longer than the failure notification time of the first network node excluded from network nodes forming the alternative communication path, the second network node being positioned in the current communication path on the down stream from the location of the network failure

(Underlining added for emphasis)

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 1 noted above, at least one claimed element is not present in the asserted combination of references. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claim 1.

Claims 2-6 depend from claim 1, and so at least similarly distinguish over each of Shinomiya and Fujii, and thus over their combination.

Further, claim 13 recites (among other things) the same features as the above-noted features of claim 1. Accordingly, at least the features of claim 13 that are the same as the above-noted features of claim 1 provide a distinction over each of Shinomiya and Fujii, and thus over their combination.

Claims 14-18 depend from claim 13, and so at least similarly distinguish over each of Shinomiya and Fujii, and thus over their combination.

**INDEPENDENT CLAIM 7**

As an example, independent claim 7, as amended, recites (among other things) the following features:

a node selecting unit ... calculates a failure notification time for each network node, the failure notification time indicating a time from when a failure notification message is transmitted by the failure detected network node until the each network node receives the failure notification message, and selects a first network node based on the failure notification time, out of the first path network nodes that are positioned in the current communication path on the upper stream from the location of the network failure; and

a path searching unit that determines an alternative communication path after the node selecting unit selects the first network node, the alternative communication path including the first network node and a second network node out of the second path network nodes and the alternative communication path excluding a network node having the failure notification time longer than the failure notification time of the first network node from network nodes forming the alternative communication path, and the second network node being positioned in the current communication path on the down stream from the location of the network failure

As will be explained below, at least the above-noted features of claim 7 are a distinction over each of Shinomiya and Fujii, and thus over their combination.

Fujii discloses on page 1032 (4. INTEGRATED NETWORK DESIGN METHOD) that "Our method for spare capacity assignment assumes that the restoration algorithm selects in the case of a failure the route requiring the shortest time".

The algorithm, as described on page 1030 (3.4 WDM NETWORK RESTORATION ALGORITHM and 3.4.1 ALTERNATE ROUTE-SEARCH PHASE), searches an alternate route. On the other hand, in claim 7, a route for which a failure notification time is calculated is the one along which a failure notification message is transmitted.

Therefore, "the route requiring the shortest time" in Fujii does not disclose "selects a first network node based on the failure notification time" in claim 7.

Next, Shinomiya discloses in Fig. 7 (P4) that "Deleting nodes having the failure notification time beyond the upper limit except for nodes on the working node" to design a protecting route.

In claim 7, the path searching unit determines an alternative communication path "the alternative communication path excluding a network node having the failure notification time longer than the failure notification time of the first network node from network nodes forming the alternative communication path". Hence, this feature of claim 7 is a distinction over Shinomiya

Therefore, the following features of claim 7 are a distinction over each of Fujii and Shinomiya, and thus over their combination.

a node selecting unit ... calculates a failure notification time for each network node, the failure notification time indicating a time from when a failure notification message is transmitted by the failure detected network node until the each network node receives the failure notification message, and selects a first network node based on the failure notification time, out of the first path network nodes that are positioned in the current communication path on the upper stream from the location of the network failure; and

a path searching unit that determines an alternative communication path after the node selecting unit selects the first network node, the alternative communication path including the first network node and a second network node out of the second path network nodes and the alternative communication path excluding a network node having the failure notification time longer than the failure notification time of the first network node from network nodes forming the alternative communication path, and the second network node being positioned in the current

communication path on the down stream from the location of the  
network failure  
(Underlining added for emphasis)

Among other things, a *prima facie* case of obviousness must establish that the asserted combination of references teaches or suggests each and every element of the claimed invention. In view of the distinction of claim 7 noted above, at least one claimed element is not present in the asserted combination of references. Hence, the Office Action fails to establish a *prima facie* case of obviousness vis-à-vis claim 7.

Claims 8-12 depend from claim 7, and so at least similarly distinguish over each of Shinomiya and Fujii, and thus over their combination.

In view of the foregoing discussion, the rejection of claims 1-18 is improper. Accordingly, withdrawal of the rejection is respectfully requested.

**Conclusion**

In light of the foregoing, withdrawal of the rejections of record and allowance of this application are earnestly solicited.

Should the Examiner believe that a telephone conference with the undersigned would assist in resolving any issues pertaining to the allowability of the above-identified application, please contact the undersigned at the telephone number listed below.

Any fee due with this paper may be charged to Deposit Account No. 50-1290.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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